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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/661,175

09/12/2003

Clarence E. Thomas

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03/14/2006

BAKER BOTTS L.L.P.  
PATENT DEPARTMENT  
98 SAN JACINTO BLVD., SUITE 1500  
AUSTIN, TX 78701-4039

EXAMINER

LEE, HWA S

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/661,175

Applicant(s)

THOMAS ET AL.

Examiner

Andrew Hwa S. Lee

Art Unit

2877

(M)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4 sheets.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims 1-12 in the reply filed on 3/8/06 is acknowledged. The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, and 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 2002/0145773).

For claims 1 and 8, Tanaka et al (Tanaka hereinafter) show a hologram recording apparatus and method comprising:

an illumination lens (Lr) operable to focus a reference beam;  
a beam splitter (13) optically coupled to the illumination lens by the reference beam; and  
a reference mirror (45) located at a waist of the reference beam, the reference beam  
mirror operable to eliminate a reference objective.

Although Tanaka may not expressly state the functional use of the elements, such as the use of word "operable", a recitation of the intended use of the claimed invention must result in a

Art Unit: 2877

structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With regards to claim 2, Tanaka only shows a schematic drawing of a beamsplitter and does not expressly state to use a cube beam splitter. Official Notice is taken that cube beam splitters are well known in the art and at the time of the invention one of ordinary skill in the art would have used a cube beam splitter since a cube beam splitter is notoriously well known for splitting beams.

With regards to claim 3, Tanaka shows a  $\frac{1}{4}$  wave plate (paragraph [0101]).

With regards to claim 5, Tanaka shows the reference mirror comprises a flat mirror (45).

With regards to claims 6 and 11, Tanaka shows the reference mirror operable to maintain optical symmetry of a reference arm and a target arm.

With regards to claims 7 and 10, Tanaka shows the reference mirror operable to form a first wavefront substantially similar to a second wavefront formed by the reference objective. (paragraph [0059])

With regards to claim 9, Tanaka shows the reference mirror operable to replace a reference objective.

3. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka as applied to claims 1 and 8 above, and further in view of Zgonik (US 6,781,725).

Zgonik shows confocal holographic optical storage having reference mirror at the waist of the reference beam wherein the laser beam (and thus the reference beam too) is a Gaussian beam (column 4, lines 36+). At the time of the invention, one of ordinary skill in the art would have used a laser source emitting a Gaussian beam for the properties such as least dilation by refraction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Andrew Hwa Lee', is positioned above the printed name.

Andrew Hwa Lee  
Primary Examiner  
Art Unit 2877